FACT SHEET FOR NPDES PERMIT NO. WA0003387
TOSCO TACOMA TERMINAL

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES) of permits, which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the state of Washington on the basis of Chapter 90.48 Revised Code of Washington (RCW) which defines the Department of Ecology's (Department) authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the state include procedures for issuing permits [Chapter 173-220 Washington Administrative Code (WAC)], water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least 30 days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix C--Response to Comments.

GENERAL INFORMATION	
Applicant:	Ken R. Durham
Facility Name and Address:	Tosco Tacoma Terminal 520 East “D” Street Tacoma, WA 98421
Type of Facility:	Petroleum Bulk Station and Terminal
SIC Code:	5171
Discharge Location:	Thea Foss Waterway Latitude: 47° 15' 30" N Longitude: 122° 25' 58" W
Water Body ID Number:	WA-10-0030

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Tosco Tacoma Terminal is located on the eastern bank of Thea Foss Waterway at 520 East "D" Street, Tacoma, Pierce County. Tosco is classified as a Petroleum Bulk Station and Terminal, SIC Code 5171.

HISTORY

The facility was first operated in the 1920s by General Petroleum Company as a bulk petroleum storage and distribution facility. General Petroleum later changed its name to Mobil Oil Company. In 1989, Mobil Oil sold the Tacoma terminal to BP Oil Company (formally British Petroleum). Finally, on December 28, 1993, Tosco Northwest Company, a division of Tosco Corporation, bought the facility.

INDUSTRIAL PROCESS

The Tosco Tacoma Terminal is a bulk petroleum storage, distribution, and blending facility with a normal safe-fill height storage capacity of approximately 158 thousand barrels (6.7 million gallons). The terminal presently handles gasoline (unleaded regular or 87, premium or 92, and subgrade or 84), diesel fuel, bulk ethanol, and gasoline additives. The annual facility throughput is approximately 180,000,000 gallons per year. Product is received by pipeline and tank trucks and shipped by tank trucks. All pipelines are located aboveground, including those located between the tank farm and truck loading rack.

High dikes surround the tank farms. The capacity of the secondary containment is equal to the capacity of the largest tank in the tank farm area plus allowances for rainfall and fire protection. Areas within the dikes are not accessible by vehicles and were lined with concrete or synthetic liners in recent years to prevent runoff infiltration to ground. Concrete was placed under pipes and in places of heavy foot traffic. Areas within the dikes are cleaned thoroughly once a year. Synthetic liners are checked for ruptures periodically and repaired if necessary. All the areas outside the tank farms are generally paved with commercial asphalt with minor areas of concrete paving. There is no bare ground at the facility.

DISCHARGE AND TREATMENT SYSTEM

Runoff is collected in individual subdike areas, one per tank excluding the water storage tanks, from which water is pumped to one of two 4,400 barrel settling tanks. Runoff collected from the 15,000 gallon spill containment is removed using a vacuum truck and disposed of. From the tanks runoff is routed to the oil/water separator for treatment and it is tested before being discharged. When the test results are not meeting the NPDES permit requirements runoff is diverted to two granular activated carbon filtration units. The oil/water separator consists of an open-top rectangular tank with four weirs and downturned outflow pipe. Water is discharged in batches following laboratory analysis and review of results. Accumulated oil is hauled off by vacuum truck or recycled. The oil/water separator discharge is subject to the NPDES permit.

The outfall from the oil/water separator is a single pipe which flows into the mouth of Thea Foss Waterway. No dilution zone has been established for the outfall. The outfall was located above sea level during the inspection on June 17, 1999, just before the noon tide. The sea level was at least two feet above mean lower low water (MLLW) at that time.

Tosco also discharges effluent from tank hydrotesting. Hydrotesting is performed at the request of regulatory agencies to ensure a tank is leak free after major tank construction work has been completed. The facility has installed double bottoms on all major storage tanks over the last few years. The double

bottoms better detect and prevent leaks. In addition to petroleum constituents, hydrotest water may contain elevated levels of copper, lead, and zinc. There is only one tank, number 8, that the double bottom has not been installed yet. Tosco will install double bottom and then hydrotest the tank during next year or two. This will be the last hydrotesting in the foreseeable future.

PERMIT STATUS

The previous permit for this facility was issued on October 18, 1993, and expired on October 25, 1998. The previous permit placed effluent limitations as listed in Table 1.

Table 1

The previous permit effluent limitations

Parameters	Units	Monthly Average	Daily Maximum
Oil and Grease (O&G)	Milligrams per litter (mg/L)	10	15
Total Suspended Solids (TSS)	mg/L	30	45
Benzene	mg/L		0.04
Ethylbenzene	mg/L		0.1
Total Petroleum Hydrocarbons-Gasoline (TPH-G)	mg/L		1
Total Petroleum Hydrocarbons-Diesel (TPH-D)	mg/L		10
pH	Standard Units (SU)	Not outside the range of 6 to 9	

The application for permit renewal was submitted to the Department on January 9, 1998, and accepted by the Department on August 18, 1998.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

During the history of the previous permit, the Permittee has remained in compliance with the NPDES permit limits based on Discharge Monitoring Reports (DMRs) submitted to the Department and inspections conducted by the Department. However, Tosco DMRs contain the following deficiencies:

1. Detection limits, quantitation levels, and methods used are not always reported,
2. Presence or absence of oil and grease visible sheen is not being reported,
3. Wastewater flow rate has not been reported on several occasions,
4. Wastewater flow rate is being reported in gallons per minute (gpm) as opposed to permit requirement for outfall 001 asking for reports of daily flow rates in gallons per day (gpd),
5. Units of the measurement are not always reported,
6. Several DMRs are missing from Ecology's records.

WASTEWATER CHARACTERIZATION

The proposed wastewater discharge is characterized in for parameters listed in Table 2.

Table 2

Wastewater Characterization

Parameters	Units	Daily Maximum Effluent Limitations	Application	DMRs 1994-1999
			Maximum value or range, '<' means below detection level. (Numbers of samples are in parentheses.)	
Flow	Gallons per day (gpd)		248,300	
Flow	Gallons per minute (gpm)		Not required	60-70 (4)
Flow—long term average	gpd		6,455 (12)	
Biochemical Oxygen Demand (BOD)	Milligrams per litter (mg/L)		8	
Chemical Oxygen Demand (COD)	mg/L		<5	
Total Organic Carbon (TOC)	mg/L		1.9	
Total Suspended Solids (TSS)—average	mg/L	30	4 (2)	
TSS	mg/L	45	3-5 (2)	<2-20 (29)
Ammonia (as N)	mg/L		Required but not taken	
Temperature	ºC		Required but not taken	
pH	Standard Units (SU)		6.62-8.64 (4)	6.35-8.09 (13)
Oil and Grease (O&G)—average	mg/L	10	Not required	
O&G	mg/L	15	ND	<5-10 (29)
O&G		No visible sheen	Not required	Never reported
Benzene	Micrograms per liter (µg/l)	40	<0.5	<0.5-10 (29)
Toluene (methylbenzene)	µg/l		<0.5	<0.5-41 (29)
Ethylbenzene	µg/l	100	<0.5	<0.5-70 (29)
Xylenes	µg/l		Not required	<1-300 (29)
m,p-Xylene	µg/l		<1	
o-Xylene	µg/l		<0.5	
Total Petroleum Hydrocarbons (TPH)—Gasoline (TPH-G)	mg/L	1	<0.05	<0.05-0.9 (29)
TPH—Diesel (TPH-D)	mg/L	10	<0.26	<0.24-2.3 (28)
Copper			Believed absent	Never reported
Lead			Believed absent	Never reported
Zinc			Believed absent	Never reported

PROPOSED PERMIT LIMITATIONS

Federal and state regulations require that effluent limitations set forth in a NPDES permit must be either technology or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department.

DESIGN CRITERIA

In accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria. The design criteria for this treatment facility have not been submitted to the Department. This permit requires Tosco to submit the Operation and Maintenance Manual that would contain the design criteria of the treatment facility.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All effluent limitations listed in the Table 1 are technology-based limitations set by the previous permit (1993 Fact Sheet, page 7). The Department retains all technology-based effluent limitations.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Surface water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin wide total maximum daily loading study (TMDL).

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are

more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The state of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed permit. The discharges authorized by this proposed permit should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The Water Quality Standards allow the Department to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to Thea Foss Waterway which is designated as a Class C receiving water in the vicinity of the outfall. Other nearby point source outfalls include Tosco 76 and Superior Oil. Characteristic uses include the following:

water supply (industrial); stock watering; fish migration; secondary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements of selected and essential uses.

SURFACE WATER QUALITY AND HUMAN HEALTH CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below in Table 3. In case of benzene, toluene, and ethylbenzene the lowest criterion is listed:

Table 3
Surface Water Quality and Human Health Criteria

Parameter	Criteria
Fecal Coliforms	200 organisms/100 ml maximum geometric mean
Dissolved Oxygen	4 mg/L minimum
Temperature	22 degrees Celsius maximum or incremental increases above background
pH	6.5 to 9.0 standard units
Turbidity	less than 10 NTU above background
Toxics	No toxics in toxic amounts (see Appendix C for numeric criteria for toxics of concern for this discharge)
Benzene	71 µg/l (human health)
Toluene (methylbenzene)	5,000 µg/l (chronic water quality)
Ethylbenzene	430 µg/l (acute water quality)

Thea Foss Waterway is listed on the 1996 303(d) report. Table 4 includes all parameters exceeding standards and basis for consideration of listing.

Table 4

Thea Foss Waterway 303(d) listed parameters

Parameters exceeding standards	Basis for consideration of listing
Copper	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Lead	Station Cluster CB2 exceeds cleanup screening level criteria in

Parameters exceeding standards	Basis for consideration of listing
	4/26/95 assessment.
Mercury	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Zinc	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Acenaphthene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Acenaphthylene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Anthracene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Fluorene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Phenanthrene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
2-Methylnaphthalene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
LPAH	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Fluoranthene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Pyrene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Benz(a)anthracene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Chrysene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Total Benzofluoranthenes	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Indeno(1,2,3-c,d)pyrene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Benzo(a)pyrene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Dibenzo(a,h)anthracene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Benzo(g,h,i)perylene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
HPAH	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
1,2-Dichlorobenzene	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Dimethyl Phthalate	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.

Parameters exceeding standards	Basis for consideration of listing
Butylbenzyl Phthalate	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
Bis(2-ethylhexyl) Phthlate	Station Cluster CB2 exceeds cleanup screening level criteria in 4/26/95 assessment.
PCBs	Station Cluster CB2 exceeds sediment quality standards in 4/26/95 assessment.

None of the parameters exceeding standards is reported by Tosco as present in the discharge.

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Pollutant concentrations in the proposed discharge as reported by Tosco do not exceed water quality criteria with technology-based controls which the Department has determined to be AKART.

Toxic Pollutants--Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the Water Quality Standards for Surface Waters or from having surface water quality-based effluent limits.

The following toxics were determined to be present in the discharge: benzene, toluene (methylbenzene), ethylbenzene, xylenes, TPH-D, and TPH-G. Only benzene, toluene (methylbenzene), and ethylbenzene have water quality criteria. Technology-based effluent limitations are more stringent that water quality criteria for benzene and ethylbenzene, therefore only toluene will be evaluated for a reasonable potential to determine whether or not effluent limitation would be required in this permit.

The determination of the reasonable potential for toluene to exceed the water quality criterion was evaluated with procedures given in EPA, 1991. During 1994-1999 period Tosco analyzed effluent 29 times for toluene. The concentration of toluene was above detection limit 5 times. 41 μg/l was the highest concentration. The Department assumes coefficient of variation (CV) to be 0.6—all samples below detection limit were discarded for the calculations of CV. CV is assumed to be 0.6 that when there are less than 10 observations (5 in this case). From EPA, 1991, Table 3-1, the reasonable potential multiplying factor is found to be 4.2, therefore the maximum receiving water concentration is 4.2*41=172.2 μg/l<5,000 μg/l (water quality criterion). There is no reasonable potential for toluene to exceed water quality criterion. A limit for toluene won't be required in this permit.

WHOLE EFFLUENT TOXICITY

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity. WET tests are best used to detect unknown toxicants or combinations of toxic chemicals. Ecology prefers to use standard chemical monitoring and pollution controls first and then apply WET testing to evaluate the effectiveness of the standard approaches.

The proposed permit would ordinarily contain requirements for whole effluent toxicity testing as authorized by RCW 90.48.520 and 40 CFR 122.44 and in accordance with procedures in Chapter 173-205 WAC. However, the Permittee has not characterized the effluent for priority pollutants and the Department believes that this should be done first in order to more efficiently use Permittee resources to control pollution. This permit requires the Permittee to conduct yearly effluent monitoring for priority pollutants. At the end of this permitting cycle the Department will evaluate data to determine if additional pollution control improvements are necessary in order to meet water quality standards for priority pollutants.

Special Conditions S.6. and S.7. delay the decision on whether WAC 173-205-040 would require that the Permittee's effluent be characterized for WET until monitoring for priority pollutants has determined if additional pollution control improvements are necessary in order to meet water quality standards for individual chemicals. If additional pollution controls are needed, then the Permittee will be given a compliance schedule for implementing these controls and a WET characterization will be required after completion of the compliance schedule. WAC 173-205-030(4) allows the Department to delay effluent characterization for WET for existing facilities that are under a compliance schedule in a permit to implement technology-based controls or to achieve compliance with surface water quality-based effluent limits. If monitoring for priority pollutants does not indicate the need for additional pollutant controls, then a WET characterization will be required without delay so that unknown toxicants or combinations of toxic chemicals can be detected and eliminated.

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permittees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics that this discharge has no reasonable potential to violate the Sediment Management Standards.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

It is assumed that this Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

COMPARISON OF EFFLUENT LIMITS WITH THE EXISTING PERMIT ISSUED OCTOBER 18, 1993

The proposed limits are the same as existing limits.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

LAB ACCREDITATION

With the exception of certain parameters the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories.*

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

TREATMENT SYSTEM OPERATING PLAN

In accordance with state and federal regulations, the Permittee is required to take all reasonable steps to properly operate and maintain the treatment system [40 CFR 122.41(e)] and WAC 173-220-150 (1)(g). An operation and maintenance manual will be submitted as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150). It has been determined that the implementation of the procedures in the Treatment System Operating Plan is a reasonable measure to ensure compliance with the terms and limitations in the permit.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis

for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit. Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions. Condition G12 incorporates by reference all other requirements of 40 CFR 122.41 and 122.42. Condition G13 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G14 requires the payment of permit fees. Condition G15 describes the penalties for violating permit conditions.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this proposed permit be issued for five years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on September 5, 1999, and September 12, 1999, in the Tacoma News Tribune to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on (date) in (name of publication) to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6280, or by writing to the address listed above.

This permit and fact sheet were written by Jacek Anuszewski, P.E.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART-- An acronym for "all known, available, and reasonable methods of treatment".

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation --The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Major Facility--A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Responsible Corporate Officer-- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C--RESPONSE TO COMMENTS

Ecology received comment letters from two Puget Sound environmental organizations: Citizens For A Healthy Bay (CHB), signed by Karen Dinicola (Tacoma) and Puget Soundkeeper Alliance (PSA), signed by Joe Buckwalter (Seattle). The comments were prefaced, in part, as concerns with protecting recent cleanup efforts in the Thea Foss Waterway.

Both sets of comments addressed similar issues, and so the comments have been grouped by similar issues. For each issue, the comments are quoted from CHB, then PSA, respectively.

Issue #1:

This draft permit does not differ significantly from the previous permit; however the facility has not fully complied with the existing permit. Our review of the DMRs suggests that monthly measurements are not being made for important parameters. Numerous other lapses and deficiencies are listed in the fact sheet, but no enforcement action has been taken. Under these circumstances, it is impossible to establish whether or not Tosco has exceeded permit limits. Ecology should scrutinize this Permittee during the next permit cycle.

On February 15, 1996, Puget Soundkeeper Alliance (PSA) filed a Notice of Intent to File Suit against former facility owner Unocal, based on numerous and excessive violations of permit effluent limitations and incomplete compliance with monitoring and reporting requirements. Tosco has not fully complied with the expiring permit's monitoring and reporting requirements (see Fact Sheet, page 3). In 1999 quarterly Discharge Monitoring Reports (DMR's), PSA observed that average, maximum, and minimum data reported were sometimes identical numbers, suggesting that monitoring of the parameter was not done on a monthly basis.

Ecology's Response to Issue #1:

Tosco has been allowed to submit DMRs on a quarterly basis. A review of Tosco's 1999 DMRs showed that each three month period was summarized on the DMR form, which leaves the question of individual test results and frequency unclear. However, Tosco then attached a "Quarterly Sampling and Test Report" form which details each test result and lists the date of that testing. With this format, compliance with the monthly monitoring and reporting requirements is clear for most parameters.

Tosco's reporting format indicates that they were in compliance with monitoring and reporting requirements in 1999, with two possible exceptions- flowrate and visible sheen reporting. First, the current permit monitoring frequency for flow is weekly, but the DMRs only list quarterly maximum and average. Also, visible sheen information is only listed on the regular DMR sheets as "no visible sheen" for minimum, average, and maximum. More detailed information for these two parameters is not included on Tosco's "Quarterly Sampling and Test Report". In both cases, this reporting format does not clearly show that the flow was monitored weekly, nor that the effluent was monitored daily for a visible sheen (specifically, on the days that the facility discharges stormwater).

Tosco has fallen short of the reporting requirements in numerous instances, and their reporting methodology has left some questions about compliance. Ecology will address this in two ways. First, the proposed permit requires the flowrate to be continuously metered and recorded in gallons per day. To clearly show that this has been done, Tosco should record and list daily treated effluent flowrates in their "Quarterly Sampling and Test Report". In a second column, Tosco should report the findings from the daily visible sheen inspection.

Issue #2:

We suggest that Tosco be required to submit DMRs monthly, rather than quarterly, for a period of at least one year following issuance of this permit.

Puget Soundkeeper alliance recommends that Tosco be required to submit DMRs monthly instead of quarterly.

Ecology Response to Issue #2:

Tosco may continue to submit the DMRs on a quarterly basis. However, Ecology will pay close attention to the DMRs submitted by Tosco after the new permit is issued. Compliance with all reporting requirements, including detection limits, quantitation levels, methods used, daily visible sheen inspections, proper and clear flowrate reporting, and units of measurement will be closely scrutinized. Any deficiencies will subject Tosco to possible enforcement by Ecology and concerned citizens.

Issue #3:

During this cycle, the facility should also be required to monitor and report concentrations of copper, lead, and zinc (which were never reported in the wastewater characterization) and toluene and xylenes (which have been reported at levels high enough to be of potential concern.)

Copper and zinc were two of the pollutants reported as exceeding allowable limits in PSA's notice of intent. Both copper and zinc are currently listed as parameters exceeding standards in the Thea Foss Waterway (see Fact Sheet for NPDES Permit No. WA0003387, page 8). In the draft permit, Tosco is not required to monitor copper and zinc. Puget Soundkeeper Alliance recommends that Tosco be required to monitor and report effluent concentrations of copper and zinc on a monthly basis.

Ecology Response to Issue #3:

Ecology agrees that metals data are lacking and therefore the reasonable potential to exceed water quality standards cannot be made. The draft permit does require annual priority pollutant scans, which includes these metals. However, these five data points over the course of the permit term would probably not provide a good characterization of the specific metals of most concern. To gain these needed data, Ecology agrees that twelve months of monitoring for these parameters is reasonable. The monitoring schedule has been modified to add twelve consecutive months of testing for both the dissolved and total recoverable amounts of copper, lead, and zinc. At the end of the twelve months, Ecology will analyze the data and take whatever action is appropriate.

The fact sheet acknowledges that tank hydrotest wastewater may contain elevated levels of copper, lead, and zinc. Since these metals are of special concern, Ecology requests that if tank hydrotesting occurs during the term of this new permit, then all batches of hydrotest wastewater will be tested for these three metals before discharge to the stormwater treatment system. This language has been added to the draft permit.

The draft permit requires monitoring of toluene and xylenes- see S2.A Monitoring Schedule. Monitoring and limits for benzene and ethylbenzene are retained from the previous permit, while monitoring for BTEX- benzene, toluene, ethylbenzene, and xylenes- has been added. The BTEX data will help characterize Tosco's discharge of this group of compounds plus, by subtraction of

benzene and ethylbenzene, the subset of toluene and xylenes as well. Therefore, no additional testing for these parameters will be required at this time.

Issue #4:

Another concern is implementation of appropriate BMPs to prevent accidental discharges to surface water during the off-loading of fuel barges. Barges arrive at the Tosco terminal more frequently since the failure of the Olympic pipeline in Bellingham. We have noted that other petroleum terminals in Commencement Bay consistently pre-deploy booms to contain possible spills and we would like to see Tosco begin to implement this practice as well.

On November 15, 1999, Tosco reported a spill of 150 gallons of gasoline. Other petroleum terminals, fuel docks, ship yards, and marinas often require pre-deployment of booms to contain possible spills. Puget Soundkeeper Alliance recommends that pre-deployment of booms be added to Tosco's permit as a BMP.

Ecology Response to Issue #4:

Ecology strongly supports the pre-deployment of booms as a cost-effective and logical preventive measure, and recommends that Tosco re-consider the feasibility of predeploying boom as a routine operation. We also acknowledge that at least several facilities routinely deploy containment boom as a preventive measure.

According to Tosco personnel, this spill in question occurred at the truck loading rack (not the dock), was totally contained, and did not result in a release to the environment. Tosco has several spill prevention and countermeasures in place. A permanent protective boom lines the shore in the vicinity of Tosco's dock. Also, a dedicated spill response boat is routinely docked at Tosco, with spill response personnel quickly available. Ecology reviews and approves spill prevention plans under Chapter 173-180 WAC. Ecology spill response personnel are currently reviewing Tosco's latest plan for approval.

Ecology is also looking at whether this is an AKART issue in NPDES permits. If preventive boom predeployment is deemed to be AKART, then the permit will be modified to reflect this, and Tosco will then be required to implement this measure.

APPENDIX D—SITE MAP